

Remarks

Claims 1 to 19 remain pending. Claims 1, 12, and 19 have been amended. Claims 1 and 12 are independent claims.

Claim Objections

The Examiner objected to claim 19 for informalities. Applicant has amended claim 19 to delete the word "includes" as suggested by the Examiner. Withdrawal of the objection is respectfully requested.

Claim Rejections under 35 USC 102

The Examiner rejected claims 1-9 and 12-19 as being anticipated by United States Patent No. 6,393,284 to Dent. Applicant respectfully requests reconsideration of the rejections having regard to the following remarks.

Applicant has amended independent claims 1 and 12 to particularly point out and distinctly claim the subject matter, which the Applicant regards as the invention. Specifically, amended claim 1 recites:

A method of connecting a mobile device to a network having associated channels, the method comprising:
scanning a selected subset of the associated channels to create a list of potential channels carrying signals having power in excess of a predetermined threshold;
analysing all of the entries in the list of potential channels to identify channels carrying an encoded signal; and,
establishing a connection between the mobile device and the network associated with a channel carrying a strongest signal within the channels identified as carrying the encoded signal.

Support for these amendments exists at least in Figure 4, and paragraphs [0014] and [0015] of the original specification. Independent claim 12 has been similarly amended.

For the Examiner's convenience, paragraphs [0014] and [0015] of the original specification are reproduced below (emphasis added):

[0014] Figure 3 illustrates a known method of determining which channels in the potential channel list contain GSM encoded signals. In step 118 the first channel in the potential channel list is selected. In step 122, the channel is analyzed to determine if it carries a GSM encoded signal. If the channel carries a GSM encoded signal, the channel information is recorded in a GSM channel list in step 124. Following the recording of the channel information, or if the signal is determined in step 122 to not contain a GSM encoded signal, the mobile device determines, in step 126, if the presently selected channel is the last entry in the potential channel list. If the entry is not the last entry in the potential channel list the next entry in the list is selected in step 128, and the analysis is repeated until all the channels in the entry list have been analyzed. When the last entry in the list has been analyzed the GSM channel list is created.

[0015] Figure 4 illustrates an exemplary method currently used by a variety of mobile devices to connect to a network associated with the channel carrying the strongest GSM encoded signal in accordance with step 104 of Figure 1. The mobile device examines the GSM channel list and selects the channel carrying the strongest signal in step 130. The device then attempts to initiate registration of the mobile device with the GSM station providing that signal. If a GSM registration can be made in step 132, the mobile device registers with the GSM station in step 134 and the process ends. If registration cannot be made in step 132, the mobile device determines if the

presently selected channel is the last channel in the GSM channel list. If the selected channel is not the last entry in the list the next most powerful signal is selected in step 138 and the registration process resumes, until either a channel supporting registration is selected or the GSM channel list is exhausted. If in step 136 it is determined that all the channels in the list have been exhausted, the mobile device will register, in step 140, for Emergency Service on the network associated with the channel carrying the strongest signal in the GSM channel list. Registration on non-accessible networks for Emergency Service is required for compliance to the GSM standard. A rescan counter is then initialised in step 142.

Thus, in amended claim 1, a selected subset of the associated channels is scanned to create a potential list of channels carrying signals having power in excess of a predetermined threshold. All of the entries in the list of potential channels are then analyzed to identify channels carrying an encoded signal. A connection between the mobile device and the network associated with the channel carrying a strongest signal within the channels identified as carrying the encoded signal is then established.

Applicant submits that Dent fails to teach or suggest all the elements of amended claim 1. Specifically, Applicant submits that Dent does not teach or suggest analyzing "all of the entries in the list of potential channels to identify channels carrying an encoded signal" as recited in amended claim 1. Consequently, Dent may not establish a connection between the mobile device and the network associated with a channel carrying a strongest signal within the channels identified as carrying the encoded signal" as recited in amended claim 1.

Dent discloses a method for searching for TDMA signals in "cellular radiotelephones by using a wide bandwidth receiving mode while scanning for signals in a narrow bandwidth receiving mode. Thus, when it is desired to scan the received frequency band to search for the presence of narrowband signals, the wider receiver bandwidth is first selected. When significant signal energy is identified in the wider bandwidth, a further scan using the

narrowband mode may then be provided in order to locate the narrow bandwidth channel containing the strongest signal" (see Dent at column 3, lines 24-32).

Specifically, Dent teaches that "when it is desired to scan the receive frequency band to search for the presence of narrowband signals, the wider receiver band is selected. The receiver band is then scanned in larger increments than 30 kHz, for example, 150kHz in the GSM/PCS1900 case or in 600 kHz increments in the IS95 case" (see Dent at column 5, lines 44-49, emphasis added).

Dent describes, at column 8, lines 8-36, a scanning strategy to locate narrowband AMPS or D-AMPS channels using a dual-mode cellular radiotelephone. For the convenience of the Examiner, this passage from Dent is reproduced below:

Referring now to FIG. 5, a scanning strategy to locate narrowband AMPS or D-AMPS channels using a dual-mode cellular radiotelephone begins by selecting the wideband (GSM) receiver mode at Block 502. At Block 504, the receiver is tuned to the region of the spectrum containing AMPS control channels and the receiver is step-tuned in steps of, for example 150 kHz, dwelling on each channel for a signal-strength averaging time and recording the average signal strength measured. At Block 506 a test is made as to whether any measured average signal strength exceeds a predetermined threshold. If yes, then at Block 512 narrowband AMPS mode is selected. At Block 514, the receiver is tuned to the first of the 30 kHz channel steps located within the region of the highest average signal strength identified in Block 506 and then to sequential 30 kHz channels in that region, measuring the average signal strength in each 30 kHz channel using the AMPS receiver bandwidth. At Block 516, the AMPS channel containing the largest signal strength is identified. At Block 518, the receiver is tuned to that channel and an attempt is made to decode an analog control channel.

At Block 522, if no analog control channel is properly decoded, then a determination is made as to whether additional signal strengths above threshold are present at Block 524. If yes, then Blocks 514-522 are repeated using the AMPS receiver bandwidth for all regions identified in the wideband scan of Block 504 with signal strengths over the predetermined threshold in Block 506, until an AMPS control channel is found at Block 522.

Thus, Dent first scans a wider receiver band of 150 kHz, each containing up to five 30 kHz narrowband channels, to measure the average signal strength in each of the wider receiver band. The wider band with the highest average signal strength is then selected and each of the narrowband channels within the selected wider receiver band is sequentially scanned to identify the channel containing the largest signal strength is identified and an attempt is made to decode an analog control channel for establishing connection. Furthermore, there may be than one wider receiver band channel having a measured average signal strength exceeding a predetermined threshold.

Clearly, the scanned narrowband channels of Dent do not represent all the entries in the "list of potential channels carrying having a power in excess of a predetermined threshold," as recited in amended claim 1, but only a select number of narrowband channels falling with the wider receiver band having the highest average signal strength. However, there may be additional narrowband channels having a power in excess of a predetermined threshold in one of the other non-selected wider receiver bands.

Moreover, a narrowband channel within a non-selected wider receiver band can have a stronger signal strength than a narrowband channel in the selected wider receiver band, albeit the selected wider receiver band having a greater average signal strength than the non-selected wider receiver band. Thus, in the method of Dent, connection may be established using a narrowband channel not necessarily having the strongest signal. In contrast, in the method of amended claim 1, a connection is established "between the mobile device and the network associated with a channel a carrying strongest signal within the channels identified as carrying the encoded signal" (emphasis added).

Thus, Dent fails to teach or suggest all the elements of amended method claim 1 and the corresponding amended device claim 12. Claims 2-9, 11 and 13-19 depend, directly or indirectly, from claim 1 or claim 12, and include all the features of their respective base claim. Therefore, the dependent claims are also not anticipated by Dent.

Applicant respectfully requests withdrawal of the rejections to claims 1-9 and 11-19 under 35 USC 102.

Claim Rejections under 35 USC 103

The Examiner rejected claim 10 as being unpatentable over Dent in view of U.S. Patent No. 5,465,388 to Zicker.

Claim 10 depends from claim 1 (via claim 6) and includes all the features of amended claim 1. Applicant reiterates the remarks with respect to amended claim 1 and submits that Dent cannot teach or suggest all the features of claim 10 for at least the reasons that Dent does not teach or suggest all the features of amended claim 1.

Zicker deals with cellular radiotelephones that are specifically adapted for use in emergencies. Zicker does not teach or suggest analyzing "all of the entries in the list of potential channels to identify channels carrying an encoded signal" as recited in amended claim 1. Consequently, Zicker does not teach or suggest establishing a connection between the mobile device and the network associated with a channel carrying a strongest signal within the channels identified as carrying the encoded signal" as recited in amended claim 1.

In fact, nothing in Zicker remedies the deficiencies of Dent with respect to the features of amended claim 1 and, therefore, Dent and Zicker, either alone or in combination, fail to teach or suggest all the features of claim 10.

Applicant respectfully requests withdrawal of the rejection to claim 10 under 35 USC 103.

The Commissioner is hereby authorized to charge any additional fees, and credit any over payments to Deposit Account No. 501593, in the name of Borden Ladner Gervais LLP.

Respectfully submitted,

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